

WM-2



*US Model
Canadian Model
AEP Model
UK Model
E Model*

STEREO CASSETTE PLAYER

SPECIFICATIONS

Tape track 4-track 2-channel stereo
Fast winding time Approx. 2 min. with Sony Cassette C-60
Frequency response 40—15,000 Hz (with the TAPE selector set to METAL)
40—12,000 Hz (with the TAPE selector set to NORM)
Power output 25 mW × 2 (max.)
20 mW × 2 (at 10% harmonic distortion) at dc operation
Output Headphones jacks (stereo minijack) ... 2 load impedance 8—300 ohms
Power requirements 3 V dc
Internal batteries: IEC designation R6 (size AA) × 2
External batteries (used in the supplied battery case): IEC designation R20 (size D) × 2
AC power adaptor: Refer to the following chart to choose the correct adaptor for your area.

12 V car battery: Sony DCC-127A* Car Battery Cord

*For connection with the DCC-127A, the optional PC-200 DC Plug Adaptor is required.

Battery life (continuous playback hours)

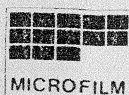
- Internal batteries:
Approx. 9 hours with supplied Sony Eveready AM3 Alkaline Batteries
- External batteries in the battery case:
Approx. 60 hours with Eveready No. E95 Alkaline Batteries

For maximum performance we recommend the use of alkaline batteries.

Dimensions Approx. 29.5 × 109 × 80 mm (w/h/d)
(1 1/4 × 4 1/4 × 3 1/4 inches)

Weight Approx. 280 g (9 7/8 oz) incl. batteries, not incl. other accessories

Country	Ac power line voltage	Optional ac power adaptor
Japan	100 V ac, 50/60 Hz	AC-39 available in Japan
U.S.A. and Canada	120 V ac, 60 Hz	AC-39 available in U.S.A. and Canada
The United Kingdom	240 V ac, 50 Hz	AC-37 available in the United Kingdom
European countries	220 V ac, 50 Hz	AC-37 available in European countries
Other countries	120 V ac (110, 220 or 240 V ac, adjustable by Sony personnel), 50/60 Hz	AC-38 available in Japan
	110, 120, 220 or 240 V ac, adjustable, 50/60 Hz	AC-38 available in other countries

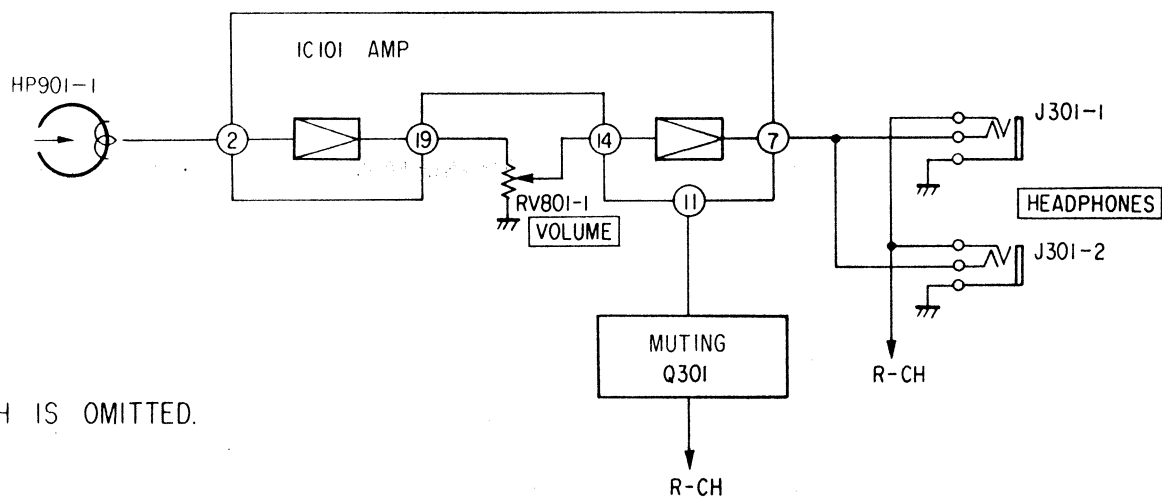


SONY

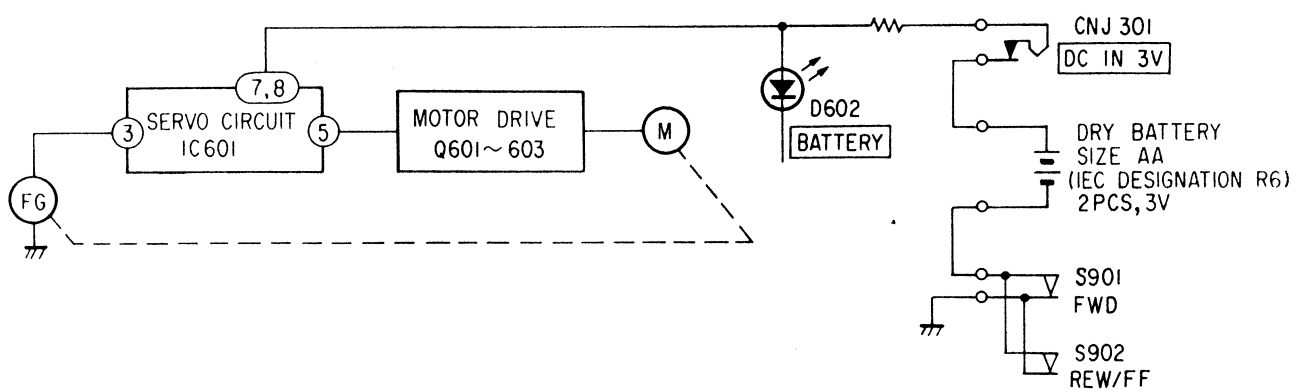
SERVICE MANUAL

SECTION 1 OUTLINE

1-1. BLOCK DIAGRAM

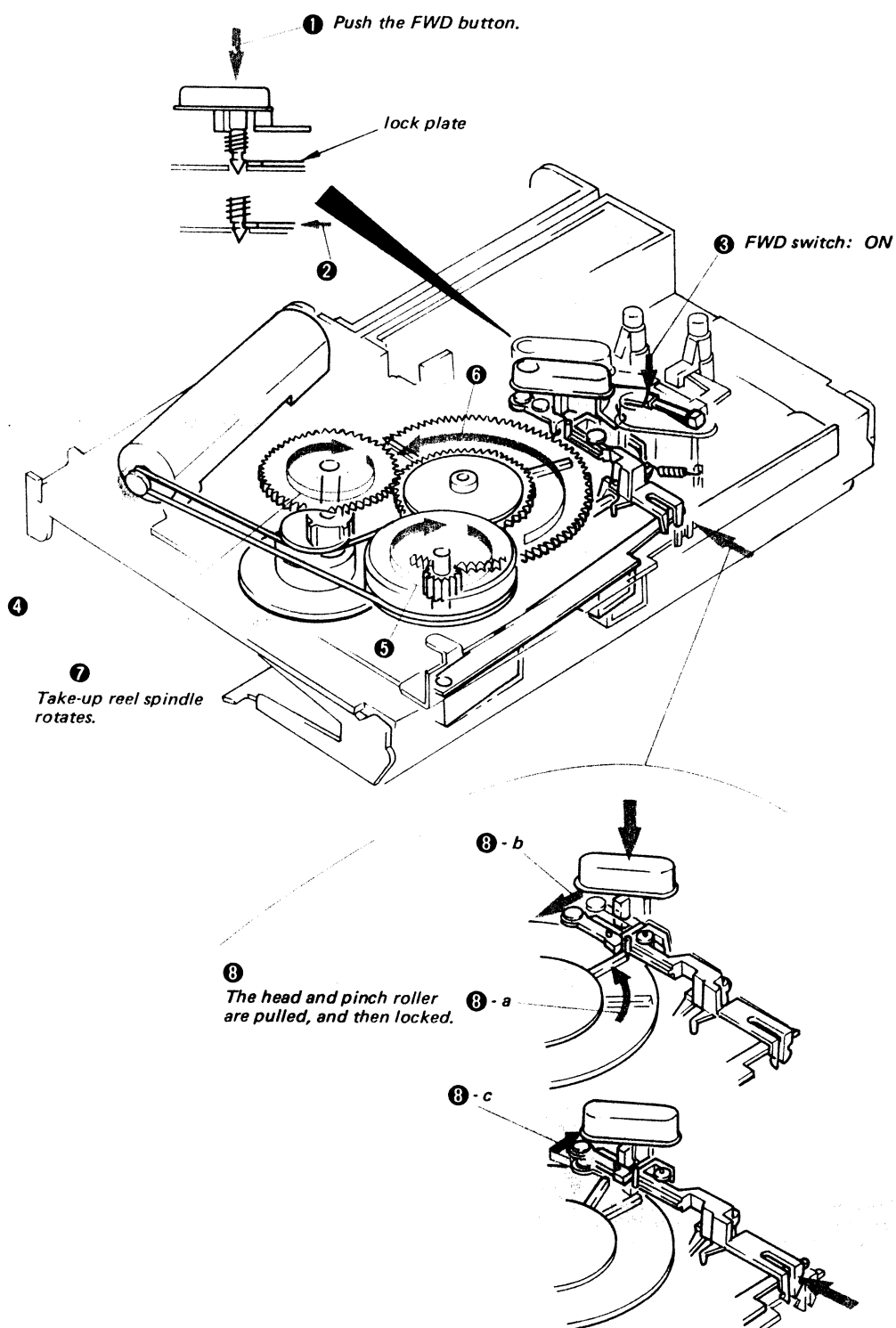


R-CH IS OMITTED.

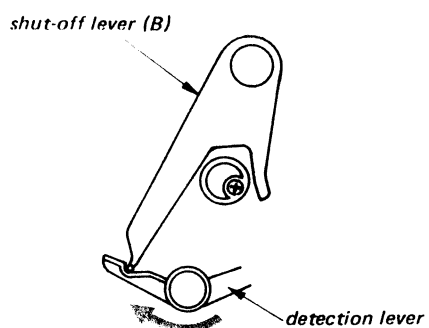


1-2. MECHANISM DESCRIPTION

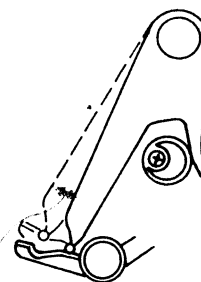
[FWD]



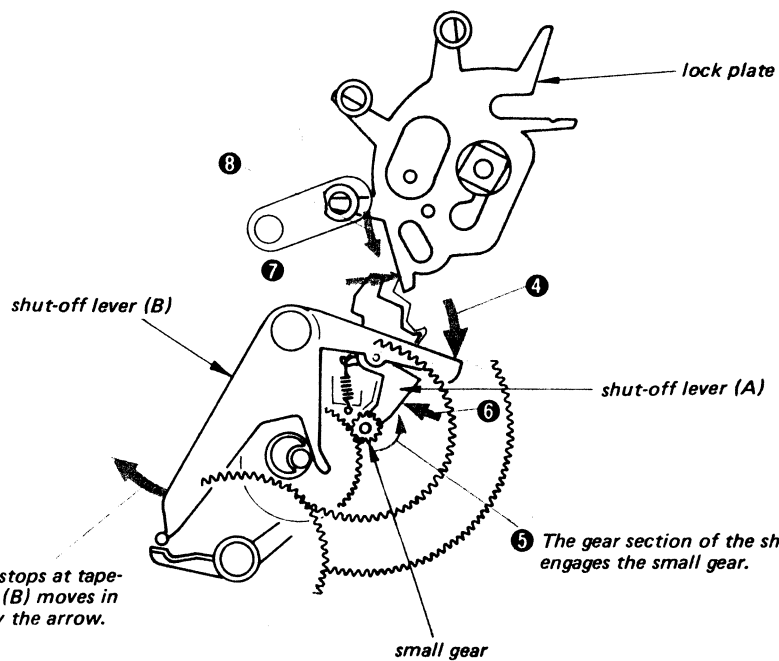
[Automatic Shut-off in FWD mode]



- ① In FWD mode, the detection lever is forced in the direction shown by the arrow by take-up reel.



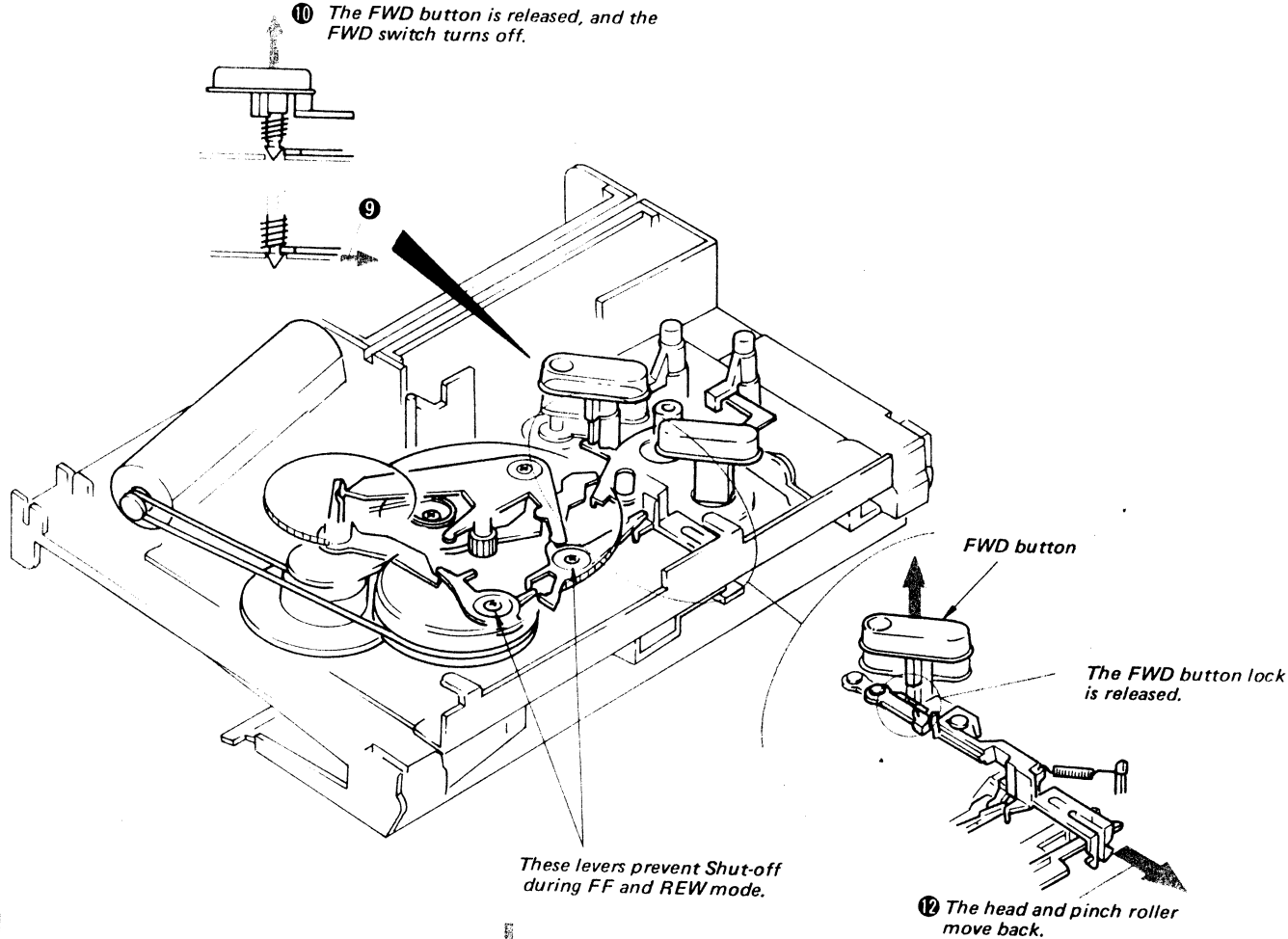
- ② In FWD mode, the shut-off lever (B) reciprocates in the space shown by the arrow.



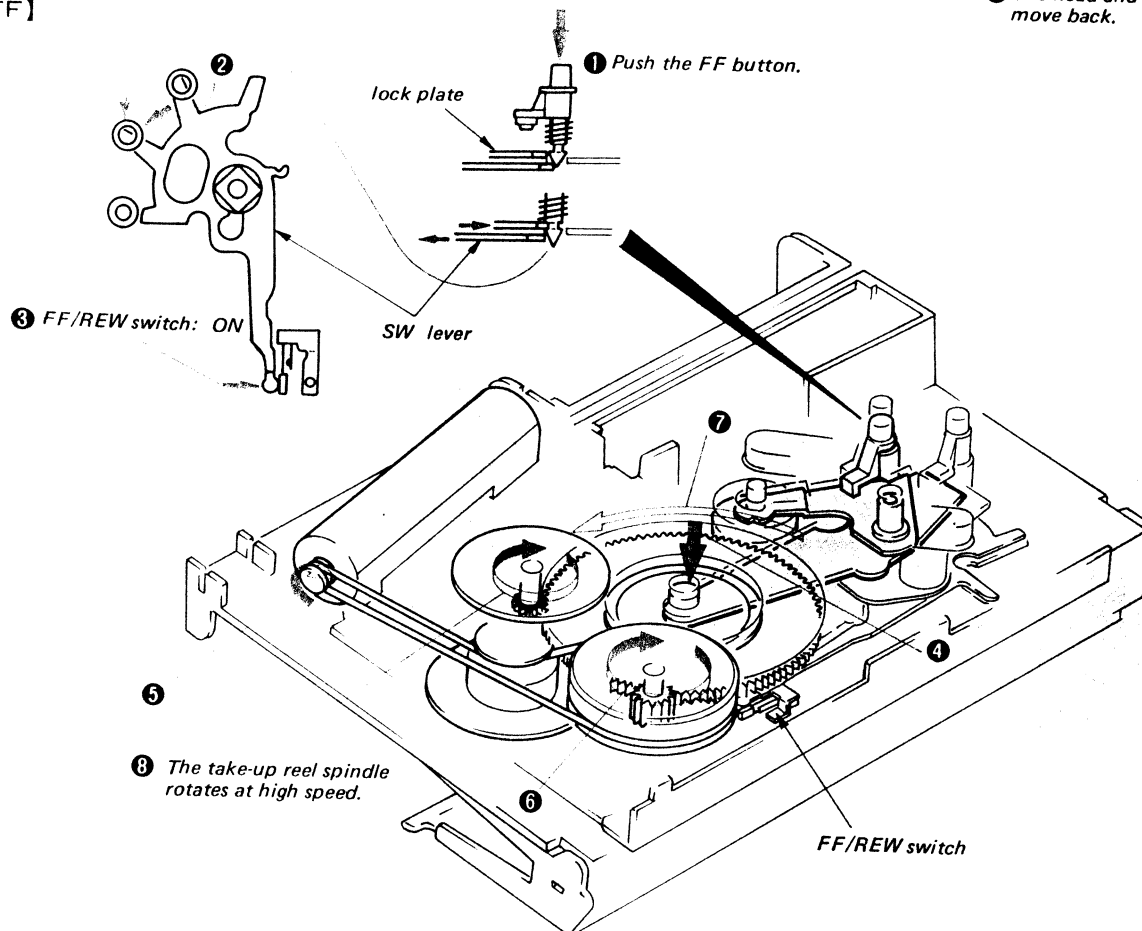
- ③ When the take-up reel stops at tape-end, the shut-off lever (B) moves in the direction shown by the arrow.

- ⑤ The gear section of the shut-off lever (A) engages the small gear.

- 10 The FWD button is released, and the FWD switch turns off.



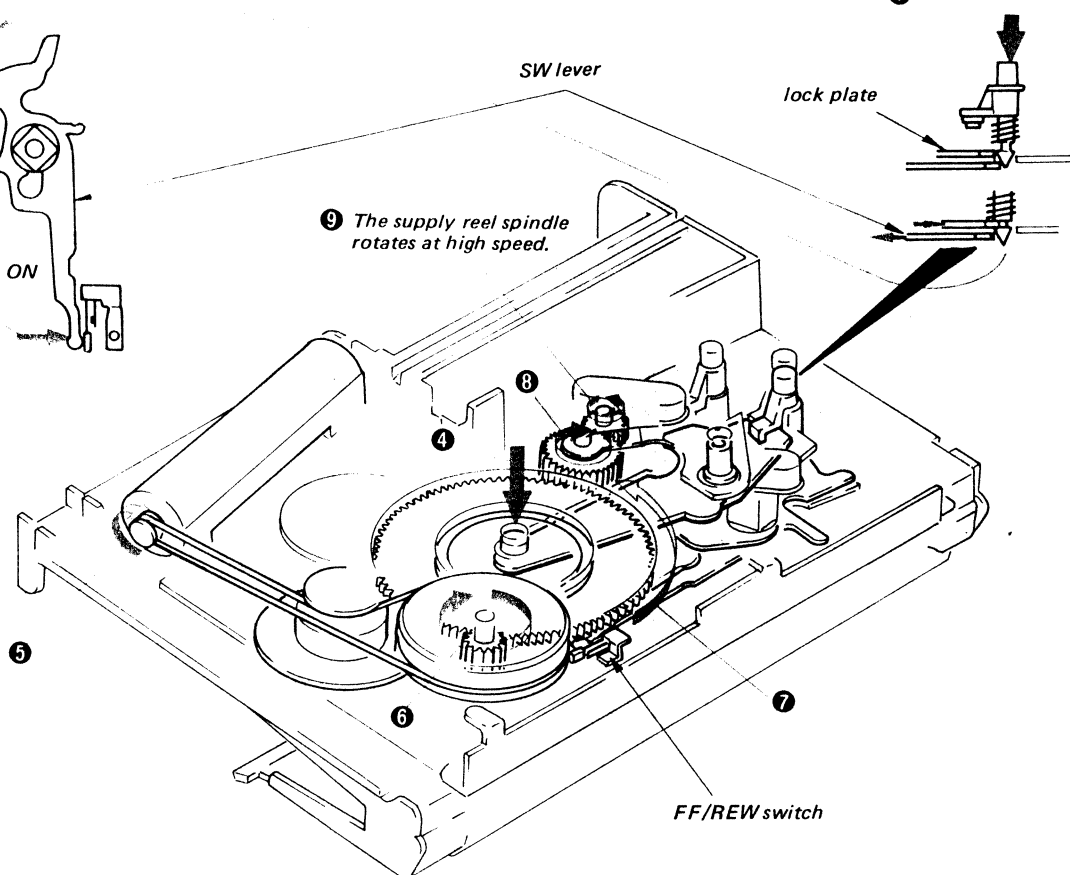
[FF]



[REW]

③ FF/REW switch: ON

① Push the REW button.



1-3. CIRCUIT DESCRIPTION

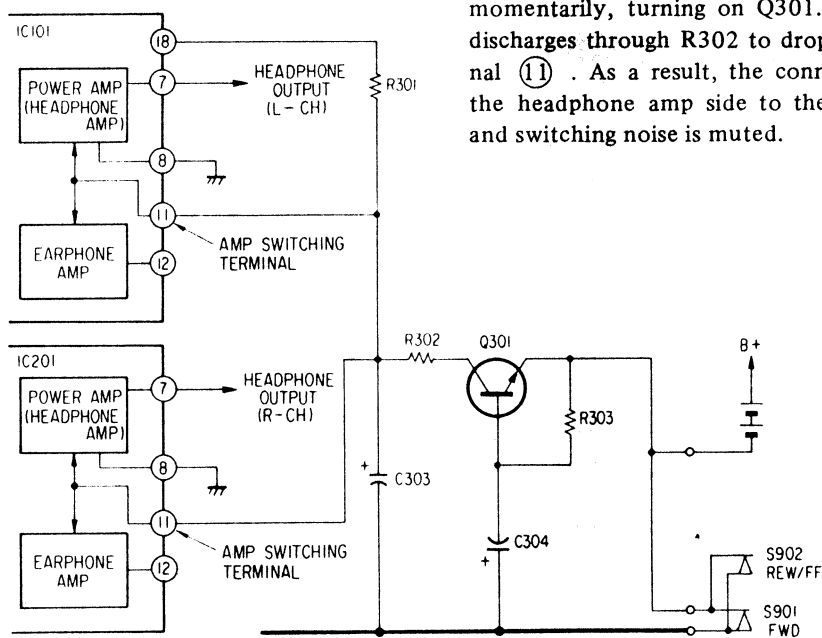
MOUNTING CIRCUIT

Terminal ⑪ of IC101 and 201 are the switching terminals for power (headphone) amplification and earphone amplification. When terminal ⑪ is at LOW, it is connected to the earphone amp side, and at HIGH it operates on the headphone amp side.

When both S901 and S902 are off, terminal ⑪ is connected to the earphone amp side, and when S901 or S902 turns on, the voltage on terminal ⑪ rises

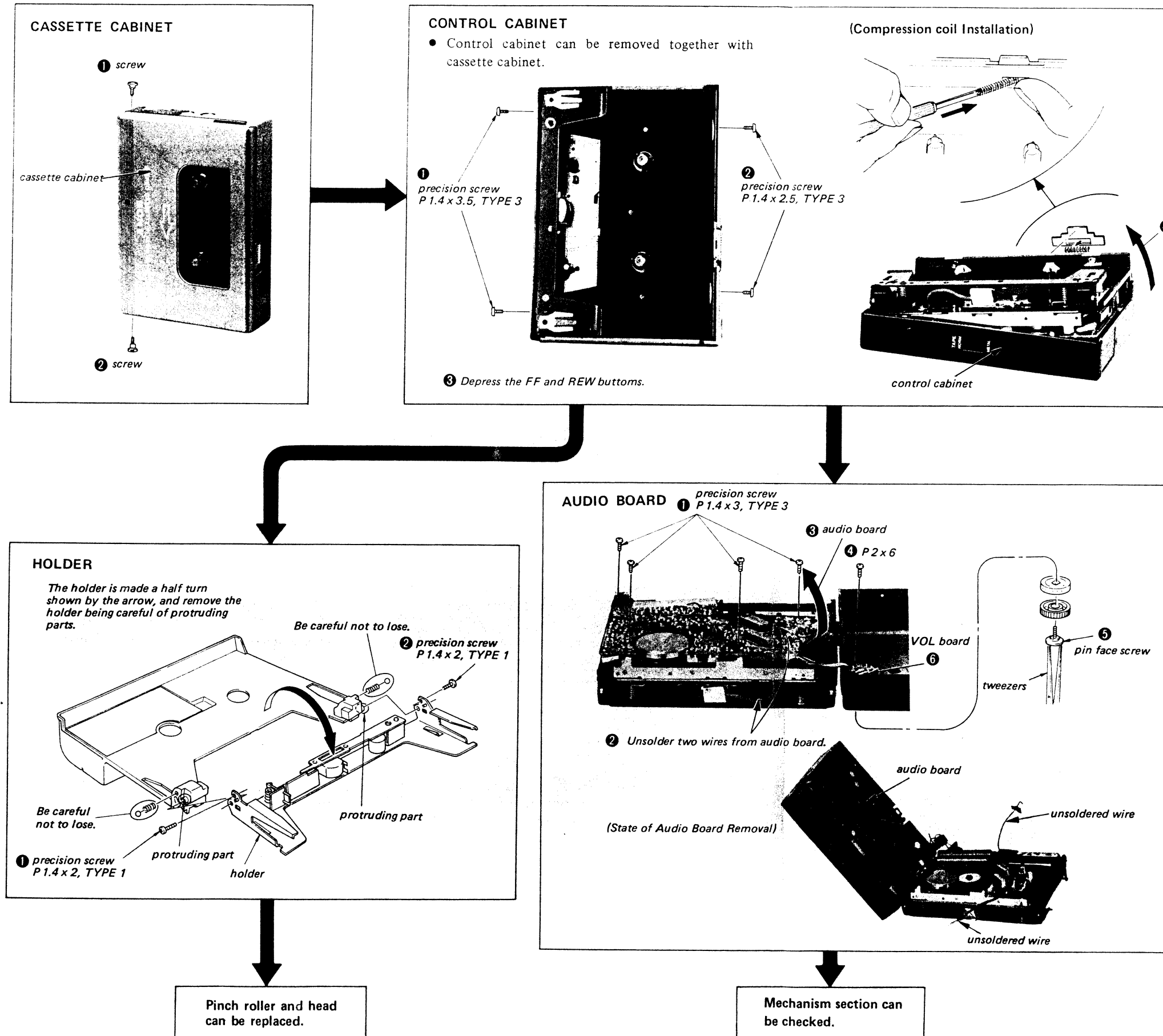
gradually because the current flows from terminal ⑮ of IC101 through R301 and C303. When it rises more than 0.6 V, terminal ⑪ switches over from the earphone amp side to the headphone amp side, and output signal is produced.

When both S901 and S902 turn off, potential difference appears between the power ground and the unit ground. This causes current to flow on C304 momentarily, turning on Q301. At this time, C303 discharges through R302 to drop potential on terminal ⑪. As a result, the connection changes from the headphone amp side to the earphone amp side and switching noise is muted.



SECTION 2 DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.



SECTION 3 ADJUSTMENTS PRECAUTION

1. Clean the following parts with a denatured-alcohol-moistened swab:

playback head	pinch roller
capstan	rubber belts
2. Demagnetize the playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

3-1. MECHANICAL ADJUSTMENTS

Torque Measurement

Perform with 2.5 V DC power.

	Torque meter	Meter reading
FWD	CQ-102C	22.5 ~ 45 g·cm (0.31 ~ 0.56 oz·inch)
FF, REW	CQ-201B	More than 65 g·cm (More than 9.04 oz·inch)
Back Tension	CQ-102C	Less than 3 g·cm (Less than 0.42 oz·inch)
Tape Pulling Force	CQ-403	More than 80 g·cm (More than 11.12 oz·inch)



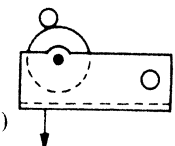
Pinch Roller Pressure Adjustment

— Play back Mode —

1. Pull the spring scale in the direction shown by the arrow.
2. Slowly return the pinch roller and read the spring scale just when the pinch roller starts rotating.

Specification:

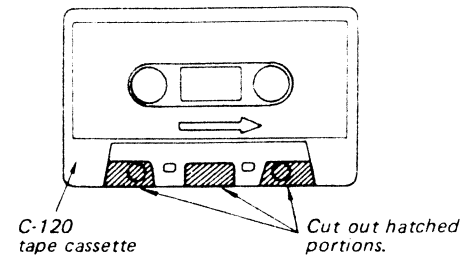
170 ± 20 g (5.3 ~ 6.7 oz)



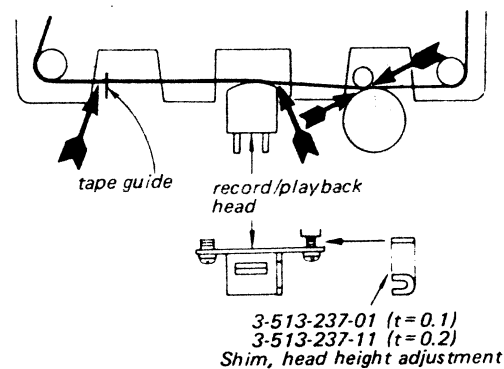
3-2. ELECTRICAL ADJUSTMENTS

Head Height Adjustment

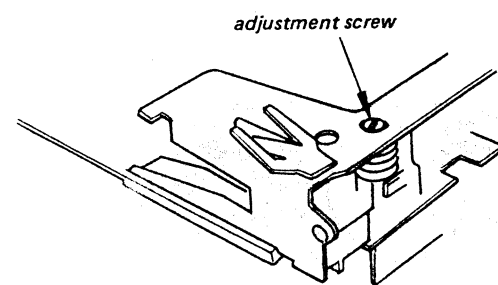
1. Prepare an adjustment cassette as shown below.



2. In playback mode and viewing from the front, adjust the head heights to eliminate tape curl and tape twist at arrowed portions.



3. If necessary, adjust the height of the tape-guide by turning the adjustment screw.

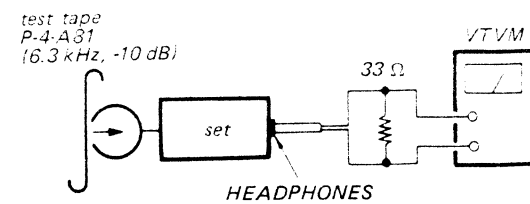


4. Apply locking compound on adjustment screw.

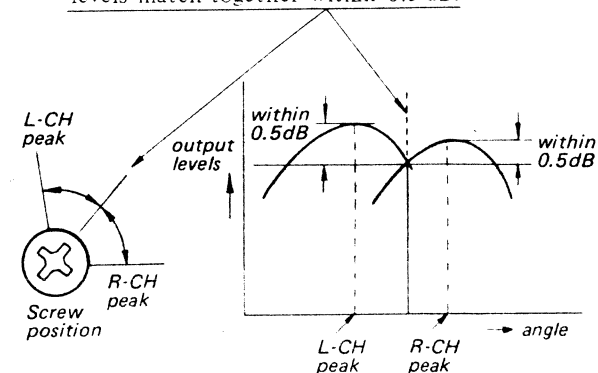
Playback Head Azimuth Adjustment

Procedure:

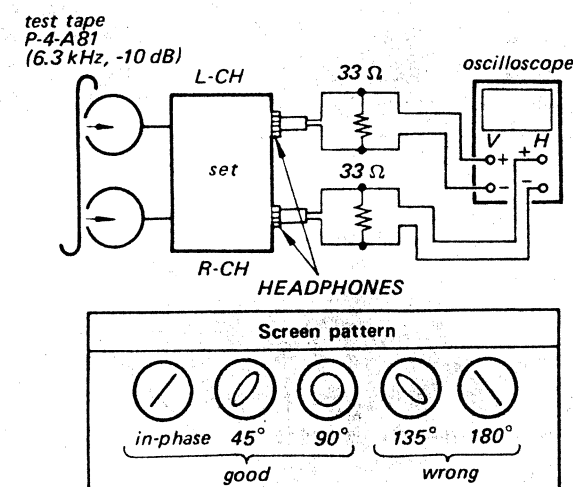
1. Mode: Playback



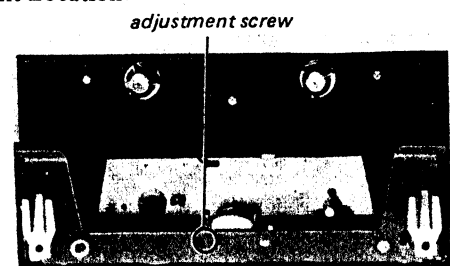
2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw until both of output levels match together within 0.5 dB.



3. Phase Check
Mode: playback



Adjustment Location:



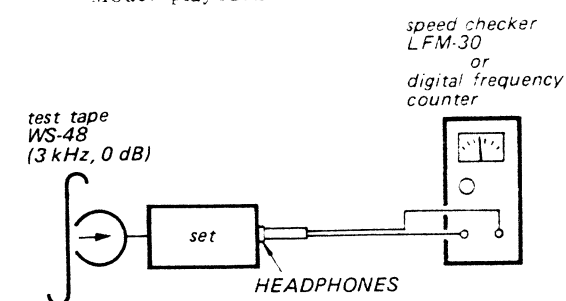
Tape Speed Adjustment

Setting:

VOLUME control: mechanical mid

Procedure:

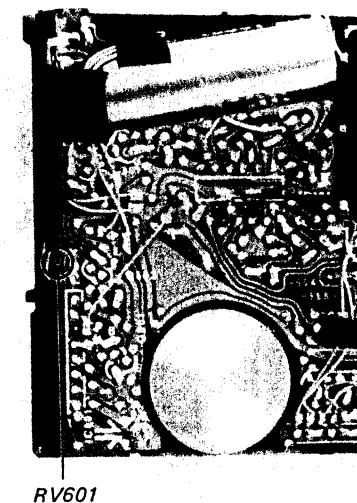
Mode: playback



Specification:

Speed checker	Digital frequency counter
$\pm 2\%$	2,940 ~ 3,060 Hz

Adjustment Location:



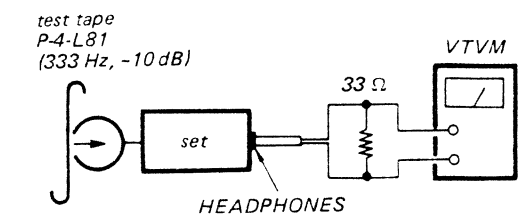
Playback Level Adjustment

Setting:

VOLUME control: mechanical mid

Procedure:

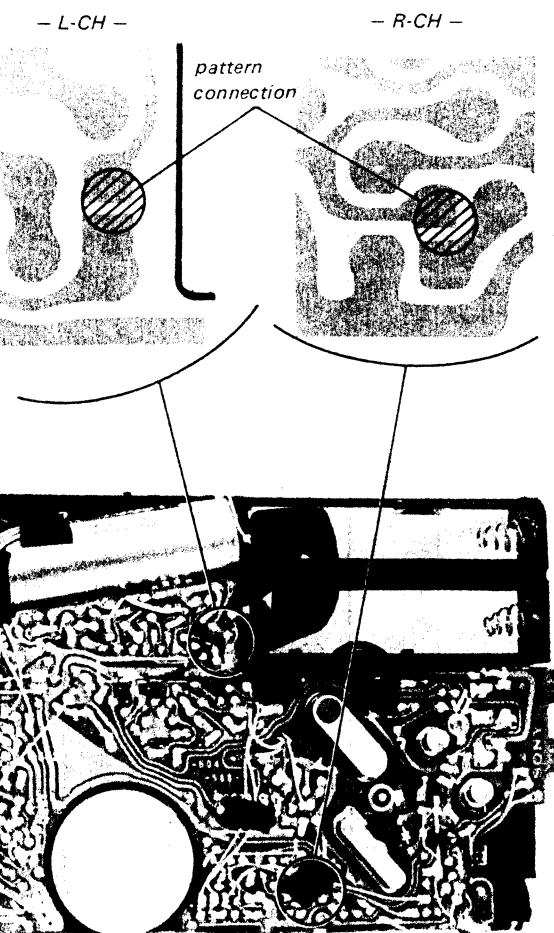
Mode: playback



Specification:

Level difference between channels:
less than 2.5 dB

- 1) If necessary, connect the patterns for lower level channel.
- 2) Confirm that the output level of HEADPHONES is fixed when repeating playback and stop.

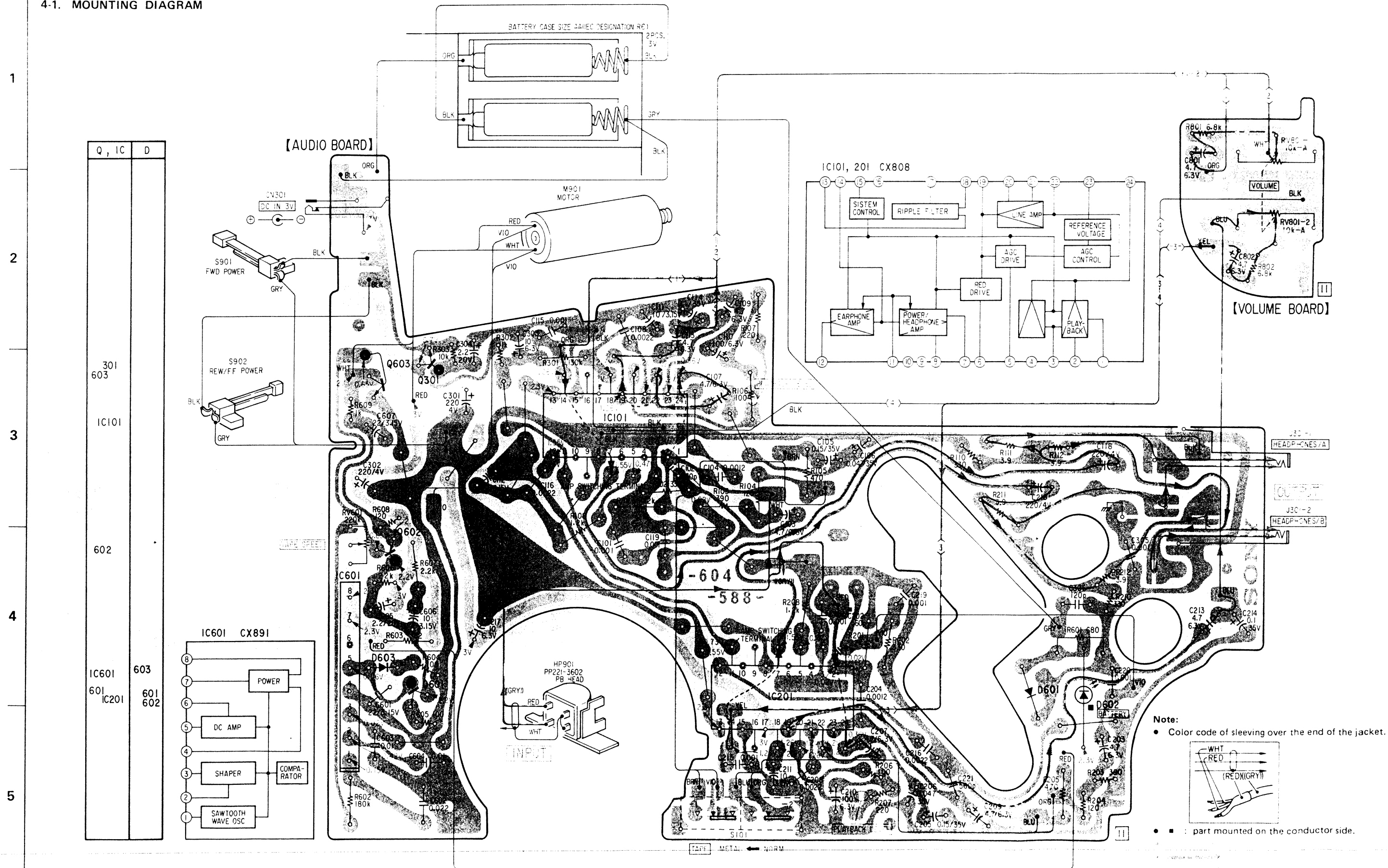


WM-2 **WM-2**

SECTION 4

DIAGRAMS

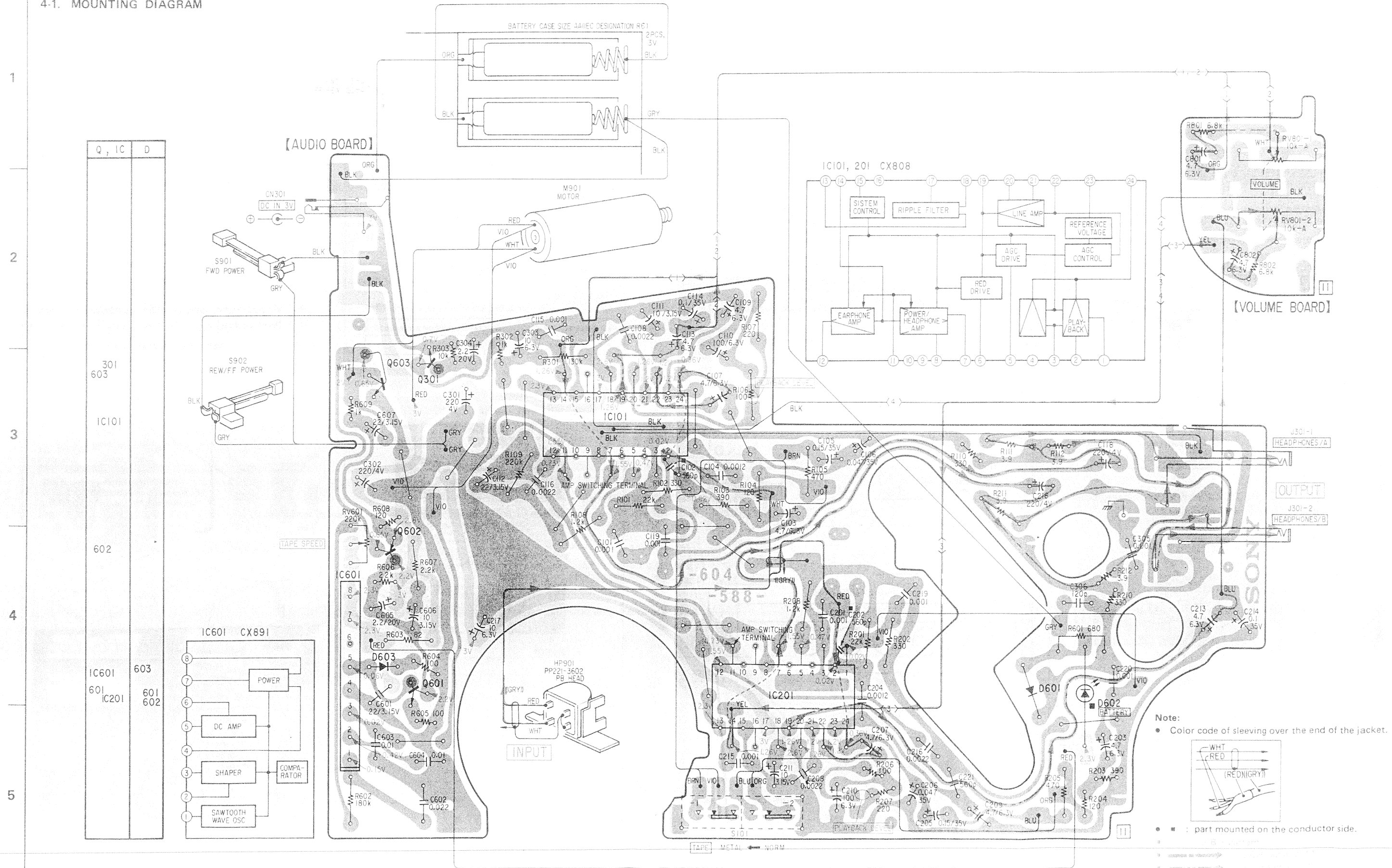
4-1. MOUNTING DIAGRAM



SECTION 4

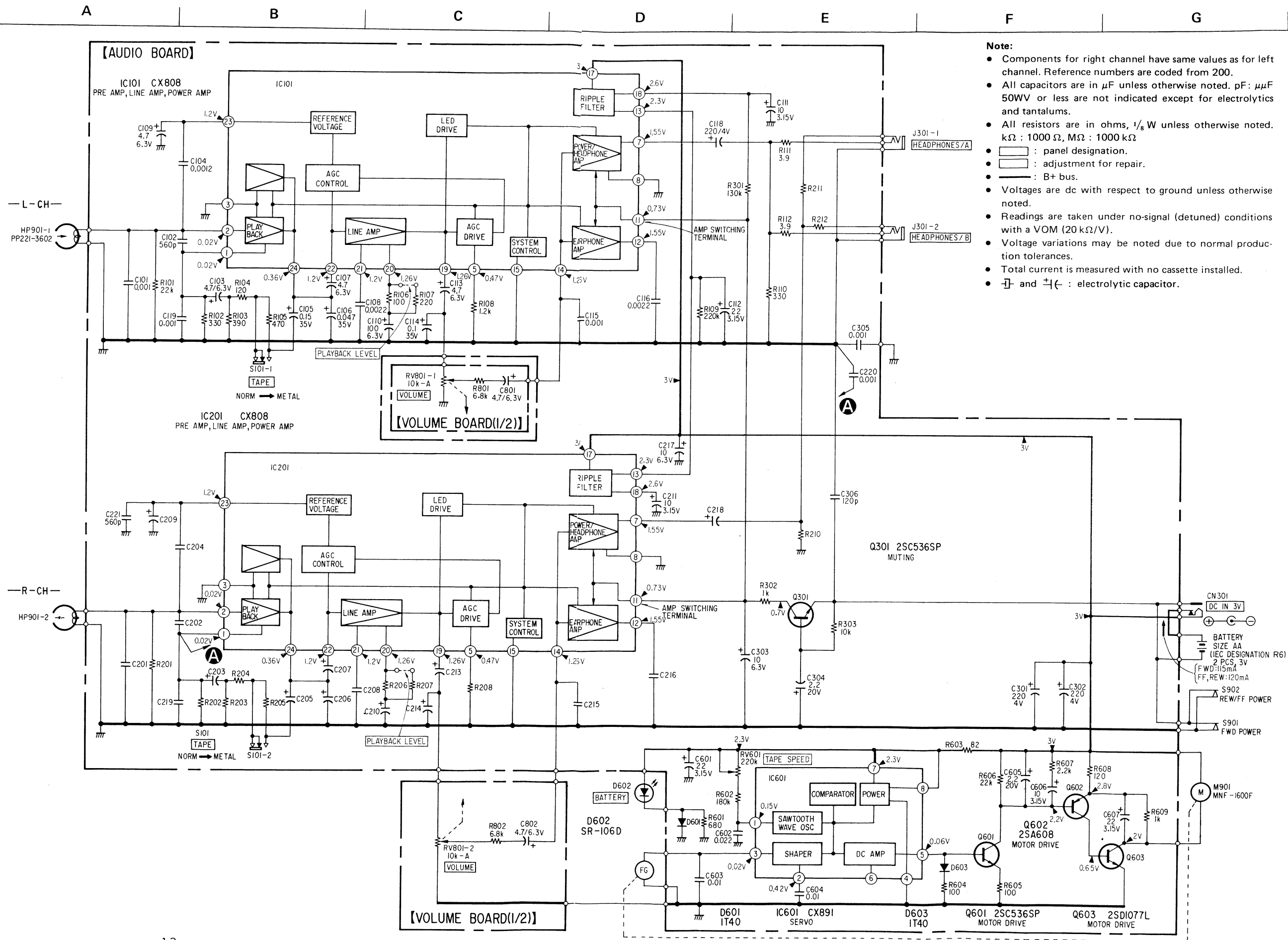
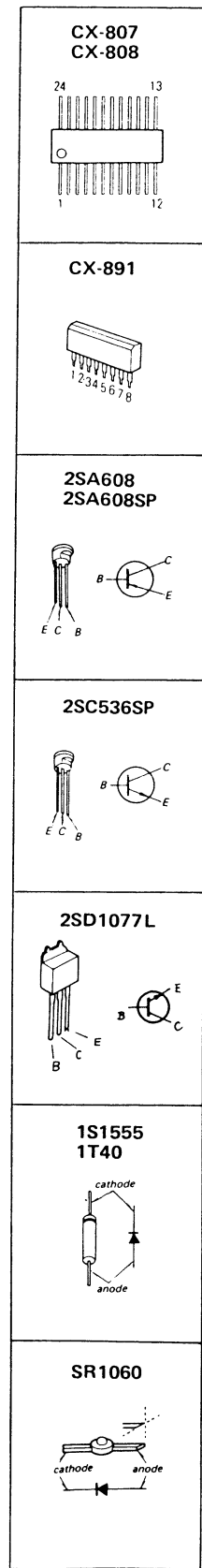
DIAGRAMS

4-1. MOUNTING DIAGRAM



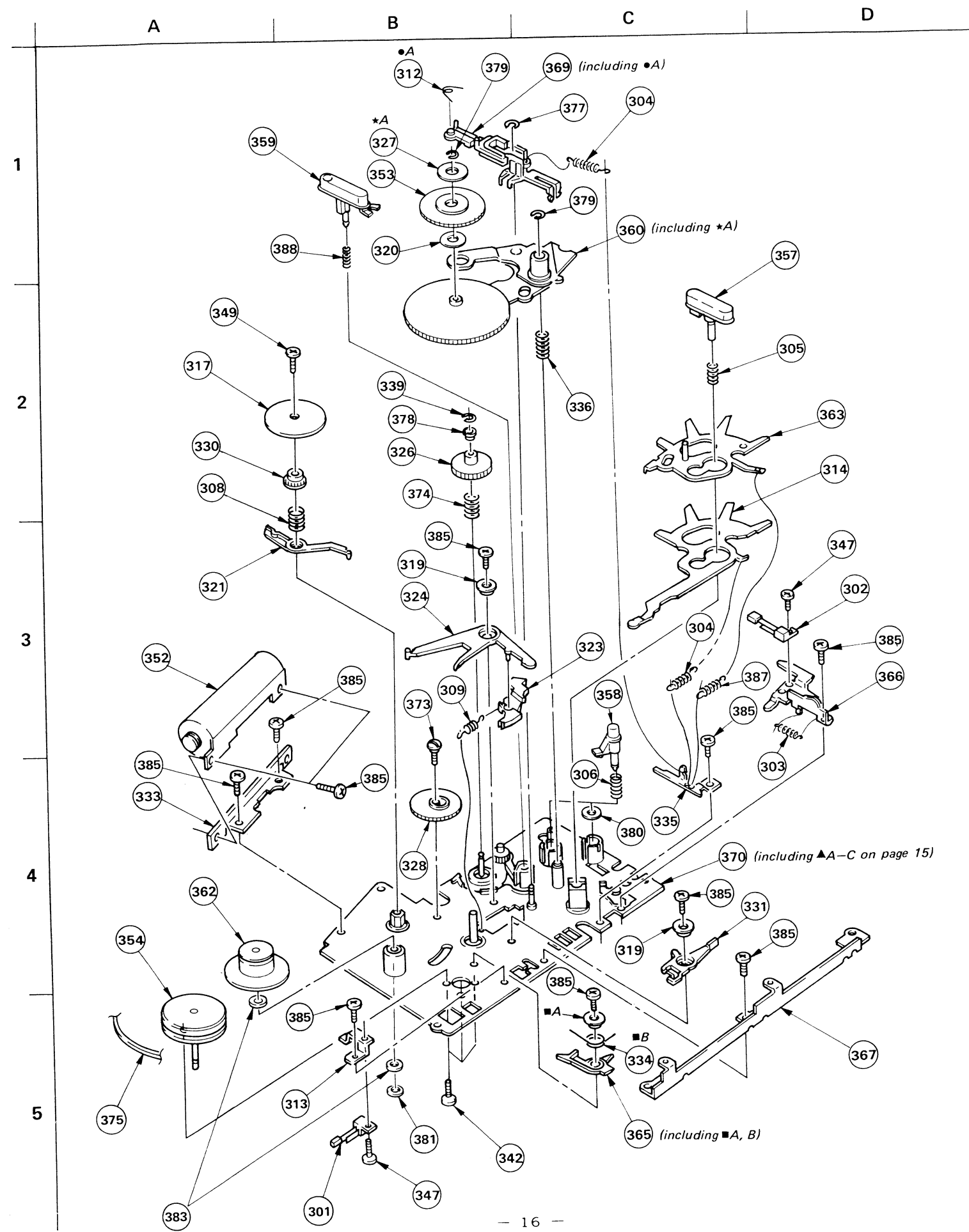
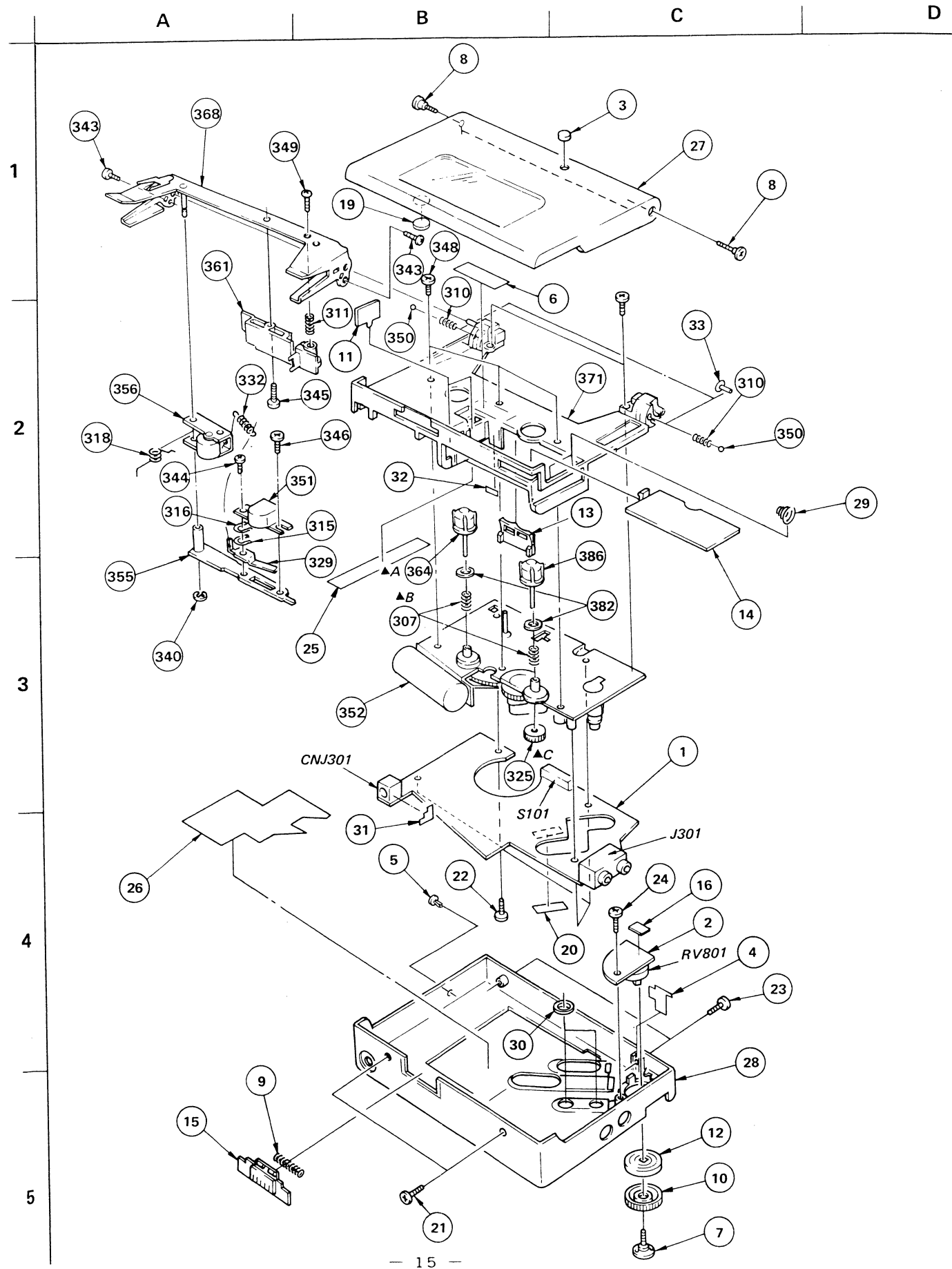
4-2. SCHEMATIC DIAGRAM

- SEMICONDUCTOR LEAD LAYOUTS



SECTION 5

EXPLODED VIEWS & PARTS LIST



GENERAL SECTION

No.	Part No.	Description
1	▲;A-3070-053-A	MOUNTED PCB, AUDIO
2	▲;1-604-589-00	PC BOARD, VOL
3	3-545-657-21	BUSH
4	▲;3-568-732-00	PAPER, SHIELD
5	3-578-232-00	ORNAMENT, ADJUSTMENT HOLE
6	3-578-101-00	PLATE, ORNAMENTAL
7	3-578-102-00	SCREW, PIN-FACE
8	3-578-103-00	SCREW
9	3-578-104-00	SPRING, COMPRESSION
10	3-578-107-00	ORNAMENT, KNOB, CONTROL
11	3-578-109-00	CONTACT
12	3-578-111-00	KNOB, CONTROL
13	3-578-114-00	PANEL, CHASSIS
14	3-578-115-00	LID, BATTERY CASE
15	3-578-117-00	BUTTON, LOCK
16	▲;3-578-216-00	CLAMP
17	*****	
18	*****	
19	3-578-231-00	CUSHION
20	3-831-441-XX	CUSHION
21	7-627-850-17	SCREW,PRECISION +P 1.4X2.5
22	7-627-850-27	SCREW,PRECISION +P 1.4X3
23	7-627-850-58	SCREW,PRECISION +P 1.4X3.5
24	7-685-104-21	SCREW +P 2X6 TYPE2 SLIT
25	9-911-816-01	CLOTH, DRAWER, BATTERY
26	9-911-863-XX	PAPER (A), SHIELD
27	X-3578-102-0	CABINET (CASSETTE) ASSY
28	X-3578-103-0	CONTROL ASSY, CABINET
29	3-578-236-00	SPRING
30	3-559-405-00	CUSHION
31	▲;3-578-229-00	SHEET, INSULATING
32	3-578-250-00	SHAFT, HOLDER SPRING
33	9-911-838-XX	CUSHION, METER

MECHANISM SECTION

No.	Part No.	Description
301	1-553-226-00	SWITCH, LEAF(S902)
302	1-553-682-00	SWITCH, LEAF(S901)
303	3-570-589-00	SPRING, TENSION
304	3-561-627-00	SPRING, TENSION
305	3-578-121-00	SPRING, COMPRESSION
306	3-578-122-00	SPRING, COMPRESSION(FR BUTTON)
307	3-578-123-00	SPRING,COMPRESSION(REEL SHAFT)
308	3-578-124-00	SPRING, COMPRESSION
309	3-578-126-00	SPRING, TENSION
310	3-578-127-00	SPRING, COMPRESSION (HOLDER)
311	3-578-128-00	SPRING,COMPRESSION(HEAD COVER)
312	3-578-130-00	SPRING
313	▲;3-578-135-00	BRACKET, SWITCH
314	▲;3-578-136-00	LEVER, SWITCH
315	3-578-138-01	SEAM
316	3-578-138-11	SEAM
317	3-578-142-00	GEAR, FWD
318	3-578-146-00	SPRING
319	▲;3-578-149-00	SHAFT, LEVER (A), SHUT-OFF
320	▲;3-578-153-00	WASHER
321	3-578-154-00	LEVER, DETECTION
322	*****	
323	3-578-156-00	LEVER (A), SHUT-OFF
324	3-578-157-00	LEVER (B), SHUT-OFF
325	3-578-158-00	GEAR, S
326	3-578-162-00	GEAR, REW
327	3-578-168-00	PLATE (B), HYSTERESIS
328	3-578-178-00	GEAR, SHUT-OFF
329	3-578-181-00	SPRING
330	3-578-244-01	GEAR, FF
331	3-578-183-00	LEVER, RETURN, S
332	3-578-220-00	SPRING, TENSION (PINCH LEVER)
333	▲;3-578-187-00	BRACKET, M
334	3-578-194-00	SPRING
335	▲;3-578-196-00	HOOK, SPRING
336	3-578-199-00	SPRING, COMPRESSION
337	*****	
338	*****	
339	3-701-439-01	WASHER
340	3-578-254-01	RING, RETAINING E-1.2
341	7-624-102-04	STOP RING 1.5, TYPE -E
342	7-627-452-87	+K 2X2.2
343	7-627-551-28	SCREW,PRECISION +P 1.4X2.5
344	7-627-553-27	SCREW,PRECISION +P 2X2.5
345	7-627-553-98	SCREW,PRECISION +P 2X8

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- Items marked "▲" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part numbers (Δ-ΔΔΔ-ΔΔΔ-XX or Δ-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

CAPACITORS:

- All capacitors are in μF . Common capacitors are omitted. Refer to the following lists for their part numbers.
- MF: μF , PF: μpF .

RESISTORS

- All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

- F: nonflammable

COILS

- MMH: mH, UH: μH

MECHANISM SECTION

No.	Part No.	Description
346	7-627-554-17	SCREW, PRECISION +P 2X3.5
347	7-627-850-18	SCREW, PRECISION +P 1.4X2.5
348	7-627-850-48	+P 1.4X1.6
349	7-627-851-17	SCREW, PRECISION +P 1.4X4.5
350	7-671-112-01	STEEL, BALL
351	8-825-502-20	HEAD
352	8-835-008-11	MOTOR, DC (MNF-1600F)
353	A-3136-025-A	GEAR (B) ASSY, DRIVING
354	X-3578-104-0	FLYWHEEL COMPLETE ASSY
355	•X-3578-105-0	CHASSIS ASSY, HEAD
356	X-3578-106-0	PINCH ROLLER ASSY
357	X-3578-107-0	BUTTON ASSY, STOP
358	X-3578-108-0	BUTTON ASSY, FR
359	X-3578-109-0	BUTTON ASSY, FWD
360	X-3578-110-0	LEVER (A) ASSY, DRIVING
361	•X-3578-111-0	COVER ASSY, ERASE HEAD
362	X-3578-113-0	WHEEL ASSY, REVERSE
363	X-3578-114-0	PLATE ASSY, LOCK
364	X-3578-115-0	CLAW ASSY, REEL
365	X-3578-117-0	LEVER ASSY, PREVENTION, S
366	X-3578-118-0	LEVER ASSY, FWD SWITCH
367	•X-3578-119-0	BRACKET ASSY, PANEL
368	•X-3578-120-0	HOLDER ASSY
369	X-3578-121-0	LEVER ASSY, FWD
370	X-3578-122-0	CHASSIS ASSY, SUB
371	X-3578-123-0	CHASSIS ASSY
372	*****	
373	3-578-214-00	SHAFT, GEAR, SHUT-OFF
374	3-578-221-00	SPRING, COMPRESSION (REW GEAR)
375	3-578-222-00	BELT (44X0.9)
376	*****	
377	3-578-224-00	WASHER
378	3-578-218-00	BUSHING, R
379	3-578-240-00	WASHER
380	*****	
381	*****	
382	3-533-073-00	WASHER
383	3-578-223-11	WASHER
384	*****	
385	7-627-850-47	SCREW, PRECISION +P 1.4X1.6
386	X-3578-126-0	CLAW ASSY, REEL
387	3-561-633-00	SPRING, TENSION
388	3-578-249-00	SPRING, COMPRESSION (FWD BUTTON)

NOTE:

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Due to standardization, parts with part numbers (A-ΔΔΔ-ΔΔΔ-XX or A-ΔΔΔΔ-ΔΔΔ-X) may be different from those used in the set.

ACCESSORY & PACKING MATERIAL

Part No.	Description
1-528-052-00	BATTERY, ALKALI MANGANESE AM3
3-570-631-00	BAG, POLYETHYLENE
3-572-854-00	BELT, SHOULDER
3-578-213-00	INDIVIDUAL CARTON
3-578-227-00	CUSHION
•3-578-252-00	LABEL
3-701-622-00	BAG, POLYETHYLENE (FOR SET)
3-701-628-00	BAG, POLYETHYLENE (FOR SHEETS)
3-701-999-00	LABEL, SERIAL NUMBER
3-783-533-11	MANUAL, INSTRUCTION
3-795-110-11	CARD, WARRANTY, INTERNATIONAL
8-893-525-10	TAPE, DEMO (CD-813)
X-3578-124-0	CASE ASSY, CARRYING
-----	HEADPHONE, MDR-4L1S
-----	CASE, EXTERNAL BATTERY, EBP-500

ELECTRICAL PARTS

Ref.No.	Part No.	Description
CN301	1-507-723-00	JACK, EXTENTION POWER
C118	1-123-827-00	CAPACITOR, ELECT 220μ 4V
C218	1-123-827-00	CAPACITOR, ELECT 220μ 4V
C301	1-123-827-00	CAPACITOR, ELECT 220μ 4V
C302	1-123-827-00	CAPACITOR, ELECT 220μ 4V
D601	8-719-815-55	DIODE 1S1555
D602	8-719-101-06	DIODE SR106D
D603	8-719-815-55	DIODE 1S1555
IC101	8-759-608-07	IC CX-807
IC201	8-759-608-07	IC CX-807
IC601	8-759-608-91	IC CX-891
J301	1-507-727-00	JACK 2P
Q301	8-729-853-63	TRANSISTOR 2SC536SP
Q601	8-729-853-63	TRANSISTOR 2SC536SP
Q602	1-806-139-11	TRANSISTOR 2SA608SP
Q603	8-729-307-72	TRANSISTOR 2SD1077L
RV601	1-226-875-00	RES, ADJ, METAL GLAZE 220K
RV801	1-228-169-00	RES, VAR, CARBON 10K/10K
S101	1-553-280-00	SWITCH, SLIDE

CAPACITORS:

All capacitors are in μF. Common capacitors are omitted. Refer to the following lists for their part numbers.
MF:μF, PF:pμF.

RESISTORS

All resistors are in ohms. Common 1/4W, 1/8W and 1/16W carbon resistors are omitted. Refer to the following lists for their part numbers.

F: nonflammable

COILS

MMH: mH, UH: μH

ELECTROLYTIC CAPACITORS

CAP. (μF)	RATING					
	6.3 VOLT.	10 VOLT.	16 VOLT.	25 VOLT.	35 VOLT.	50 VOLT.
	PART No.	PART No.	PART No.	PART No.	PART No.	PART No.
0.47						
1.0					→	1-121-726-00
2.2					→	1-121-391-00
3.3	→	→	→		→	1-121-450-00
4.7	→	→	→	1-121-392-00	→	1-121-393-00
10	→	→		1-121-395-00	→	1-121-396-00
22	→	→	1-121-651-00	1-121-398-00	→	1-121-738-00
33	→	→	1-121-479-00	1-121-480-00	1-121-662-00	1-121-152-00
47	→	→	1-121-403-00	1-121-404-00	1-121-652-00	1-121-405-00
100	→	1-121-352-00	1-121-409-00	1-121-410-00	1-121-653-00	1-121-411-00
220	1-121-419-00	1-121-414-00	1-121-415-00	1-121-416-00	1-121-357-00	1-121-417-00
330	1-121-751-00	1-121-420-00	1-121-421-00	1-121-422-00	1-121-261-00	1-121-423-00
470	1-121-424-00	1-121-805-00	1-121-521-00	1-121-654-00	1-121-655-00	1-121-656-00
1000		1-121-425-00	1-121-426-00	1-121-733-00	1-121-361-00	1-121-810-00
2200	1-121-658-00	1-121-736-00	1-121-245-00	1-121-657-00	1-121-388-00	1-123-061-00
3300	1-121-661-00	1-121-659-00	1-121-660-00	1-123-067-00	1-121-984-00	
		1-123-075-00	1-123-071-00			

CAP. (μF)	100 VOLT.	160 VOLT.	250 VOLT.	350 VOLT.
	PART No.	PART No.	PART No.	PART No.
0.47				
1.0	1-123-249-00	1-123-252-00	1-123-003-00	1-121-168-00
2.2	1-123-250-00	1-123-026-00		1-123-028-00
3.3	1-121-995-00		1-123-004-00	1-123-006-00
4.7	1-123-255-00	1-121-246-00	1-121-759-00	1-123-007-00
10	1-121-126-00	1-121-999-00	1-123-254-00	1-123-008-00
22	1-121-996-00	1-123-253-00	1-123-005-00	1-123-022-00
33	1-121-997-00	1-121-757-00		
47	1-123-251-00	1-121-919-00		
100	1-123-084-00			

CERAMIC CAPACITORS

RATING							
CAP. (pF)	50 VOLT.	CAP. (pF)	50 VOLT.	CAP. (pF)	50 VOLT.	CAP. (μF)	50 VOLT.
	PART No.		PART No.		PART No.		PART No.
0.5	1-101-837-00	22	1-102-959-00	150	1-101-361-00	0.001	1-102-074-00
0.75	1-101-586-00	24	1-102-960-00	160	1-101-367-00	0.0012	1-102-118-00
1.0	1-102-934-00	27	1-102-961-00	180	1-102-976-00	0.0015	1-102-119-00
1.5	1-101-576-00	30	1-102-962-00	200	1-102-977-00	0.0018	1-102-120-00
2.0	1-102-935-00	33	1-102-963-00	220	1-102-978-00	0.0022	1-102-121-00
3	1-102-936-00	36	1-102-964-00	240	1-102-979-00	0.0027	1-102-122-00
4	1-102-937-00	39	1-102-965-00	270	1-102-980-00	0.0033	1-102-123-00
5	1-102-942-00	43	1-102-966-00	300	1-102-981-00	0.0039	1-102-124-00
6	1-102-943-00	47	1-101-880-00	330	1-102-820-00	0.0047	1-102-125-00
7	1-102-944-00	51	1-101-882-00	360	1-102-821-00	0.0056	1-102-126-00
8	1-102-945-00	56	1-101-884-00	390	1-102-822-00	0.0068	1-102-127-00
9	1-102-946-00	62	1-101-886-00	430	1-102-823-00	0.0082	1-102-128-00
10	1-102-947-00	68	1-101-888-00	470	1-102-824-00	0.01	1-102-129-00
11	1-102-948-00	75	1-101-890-00	510	1-101-059-00	0.022	1-101-005-00
12	1-102-949-00	82	1-102-971-00	560	1-102-115-00	0.047	1-101-006-00
13	1-102-950-00	91	1-102-972-00	680	1-102-116-00		
15	1-102-951-00	100	1-102-973-00	820	1-102-117-00		
16	1-102-952-00	110	1-102-815-00				
18	1-102-953-00	120	1-102-816-00				
20	1-102-958-00	130	1-101-081-00				

0.001μF = 1,000pF

CERAMIC (SEMICONDUCTOR) CAPACITORS

RATING					
CAP. (μF)	25 VOLT.	50 VOLT.	CAP. (μF)	25 VOLT.	50 VOLT.
	PART No.	PART No.		PART No.	PART No.
0.001	→	1-161-039-00	0.018	1-161-016-00	1-161-054-00
0.0012	→	1-161-040-00	0.022	1-161-017-00	1-161-055-00
0.0015		1-161-041-00	0.027	1-161-018-00	1-161-056-00
0.0018		1-161-042-00	0.033	1-161-019-00	1-161-057-00
0.0022		1-161-043-00	0.039	1-161-010-00	1-161-058-00
0.0027	→	1-161-044-00	0.047	1-161-021-00	1-161-059-00
0.0033	→	1-161-045-00	0.056	→	1-161-060-00
0.0039	→	1-161-046-00	0.068	→	1-161-061-00
0.0047	→	1-161-047-00	0.082	1-161-024-00	1-161-062-00
0.0056	→	1-161-048-00	0.1	1-161-025-00	1-161-063-00
0.0068	→	1-161-049-00			
0.0082	1-161-012-00	1-161-050-00			
0.01	1-161-013-00	1-161-051-00			
0.012	→	1-161-052-00			
0.015	1-161-015-00	1-161-053-00			

MYLAR CAPACITORS

RATING											
CAP. (μ F)	50 VOLT. PART No.	100 VOLT. PART No.	200 VOLT. PART No.	CAP. (μ F)	50 VOLT. PART No.	100 VOLT. PART No.	200 VOLT. PART No.	CAP. (μ F)	50 VOLT. PART No.	100 VOLT. PART No.	200 VOLT. PART No.
0.001	1-108-227-00	1-108-365-00	1-108-409-00	0.01	1-108-239-00	1-108-377-00	1-108-421-00	0.1	1-108-251-00	1-108-389-00	1-108-433-00
0.0012	1-108-351-00	1-108-366-00	1-108-410-00	0.012	1-108-357-00	1-108-378-00	1-108-422-00	0.12	1-108-363-00	1-108-390-00	1-108-434-00
0.0015	1-108-228-00	1-108-367-00	1-108-411-00	0.015	1-108-240-00	1-108-379-00	1-108-423-00	0.15	1-108-252-00	1-108-391-00	1-108-435-00
0.0018	1-108-352-00	1-108-368-00	1-108-412-00	0.018	1-108-358-00	1-108-380-00	1-108-424-00	0.18	1-108-364-00	1-108-392-00	1-108-436-00
0.0022	1-108-230-00	1-108-369-00	1-108-413-00	0.022	1-108-242-00	1-108-381-00	1-108-425-00	0.22	1-108-254-00	1-108-393-00	1-108-437-00
0.0027	1-108-353-00	1-108-370-00	1-108-414-00	0.027	1-108-359-00	1-108-382-00	1-108-426-00	0.27	1-108-854-00	—	—
0.0033	1-108-232-00	1-108-371-00	1-108-415-00	0.033	1-108-244-00	1-108-383-00	1-108-427-00	0.33	1-108-855-00	—	—
0.0039	1-108-354-00	1-108-372-00	1-108-416-00	0.039	1-108-360-00	1-108-384-00	1-108-428-00	0.39	1-108-856-00	—	—
0.0047	1-108-234-00	1-108-373-00	1-108-417-00	0.047	1-108-246-00	1-108-385-00	1-108-429-00	0.47	1-108-857-00	—	—
0.0056	1-108-355-00	1-108-374-00	1-108-418-00	0.056	1-108-361-00	1-108-386-00	1-108-430-00				
0.0068	1-108-237-00	1-108-375-00	1-108-419-00	0.068	1-108-249-00	1-108-387-00	1-108-431-00				
0.0082	1-108-356-00	1-108-376-00	1-108-420-00	0.082	1-108-362-00	1-108-388-00	1-108-432-00				



TANTALUM CAPACITORS

RATING							
→ : Use the high voltage rated one.							
CAP. (μ F)	3.15 VOLT. PART No.	6.3 VOLT. PART No.	10 VOLT. PART No.	16 VOLT. PART No.	20 VOLT. PART No.	25 VOLT. PART No.	35 VOLT. PART No.
0.01					→	→	1-131-396-00
0.015						→	1-131-397-00
0.022						→	1-131-398-00
0.033						→	1-131-399-00
0.047						→	1-131-400-00
0.068					→	→	1-131-401-00
0.1					→	→	1-131-402-00
0.15					→	→	1-131-403-00
0.22					→	→	1-131-404-00
0.33					→	1-131-409-00	1-131-405-00
0.47			—		1-131-412-00	→	1-131-406-00
0.68			—	1-131-415-00	→	1-131-410-00	1-131-407-00
1.0			1-131-418-00		1-131-413-00	→	1-131-408-00
1.5		1-131-421-00	—	1-131-416-00	→	1-131-411-00	1-131-348-00
2.2	1-131-424-00	—	1-131-419-00		1-131-414-00	1-131-355-00	1-131-349-00
3.3		1-131-422-00	—	1-131-417-00	1-131-362-00	1-131-356-00	1-131-350-00
4.7	1-131-425-00		1-131-420-00	1-131-369-00	1-131-363-00	1-131-357-00	1-131-351-00
6.8		1-131-423-00	1-131-376-00	1-131-370-00	1-131-364-00	1-131-358-00	1-131-352-00
10	1-131-426-00	1-131-383-00	1-131-377-00	1-131-371-00	1-131-365-00	1-131-359-00	1-131-353-00
15	1-131-390-00	1-131-384-00	1-131-378-00	1-131-372-00	1-131-366-00	1-131-360-00	—
22	1-131-391-00	1-131-385-00	1-131-379-00	1-131-373-00	1-131-367-00		
33	1-131-392-00	1-131-386-00	1-131-380-00	1-131-374-00			
47	1-131-393-00	1-131-387-00	1-131-381-00				
68	1-131-394-00	1-131-388-00	—				
100	1-131-395-00	—	—				



TANTALUM CAPACITORS

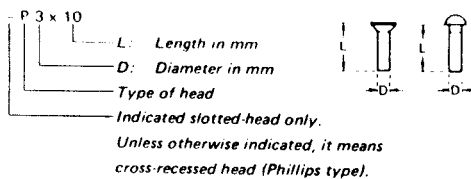
RATING						
CAP. (μ F)	3 VOLT. PART No.	6.3 VOLT. PART No.	10 VOLT. PART No.	16 VOLT. PART No.	20 VOLT. PART No.	35 VOLT. PART No.
0.033						1-131-273-00
0.047						1-131-274-00
0.068						1-131-275-00
0.1						1-131-276-00
0.15						1-131-277-00
0.22			—	—	1-131-262-00	1-131-278-00
0.33			—	—	1-131-263-00	1-131-279-00
0.47			1-131-169-00	—	1-131-264-00	1-131-280-00
0.68				1-131-258-00	1-131-265-00	1-131-281-00
1.0			1-131-254-00	—	1-131-266-00	1-131-282-00
1.5		1-131-250-00	—	—	1-131-267-00	1-131-283-00
2.2		—	—	1-131-259-00	1-131-268-00	1-131-284-00
3.3			1-131-255-00	—	1-131-269-00	—
4.7		1-131-251-00	1-131-171-00	—	1-131-270-00	—
6.8		—	—	1-131-260-00	1-131-271-00	—
10			1-131-256-00	—	1-131-272-00	—
15		1-131-252-00	—	1-131-261-00		
22		—	1-131-257-00	—		
33	1-131-176-00	1-131-253-00	1-131-173-00	—		
47	1-131-288-00	1-131-174-00	—	—		
100	1-131-177-00	—	—	—		

1/8 WATT CARBON RESISTOR

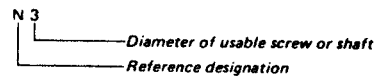
Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.	Ω	Part No.
2.0		13	1-246-821-00	91	1-246-831-00	620	1-246-841-00	4.3k	1-246-851-00	30k	1-246-861-00
2.2	1-246-751-00	15	1-246-761-00	100	1-246-771-00	680	1-246-781-00	4.7k	1-246-791-00	33k	1-246-801-00
2.4		16	1-246-822-00	110	1-246-832-00	750	1-246-842-00	5.1k	1-246-852-00	36k	1-246-862-00
2.7	1-246-752-00	18	1-246-762-00	120	1-246-772-00	820	1-246-782-00	5.6k	1-246-792-00	39k	1-246-802-00
3.0		20	1-246-823-00	130	1-246-833-33	910	1-246-843-00	6.2k	1-246-853-00	43k	1-246-863-00
3.3	1-246-753-00	22	1-246-763-00	150	1-246-773-00	1.0k	1-246-783-00	6.8k	1-246-793-00	47k	1-246-803-00
3.6		24	1-246-824-00	160	1-246-834-00	1.1k	1-246-844-00	7.5k	1-246-854-00	51k	1-246-864-00
3.9	1-246-754-00	27	1-246-764-00	180	1-246-774-00	1.2k	1-246-784-00	8.2k	1-246-794-00	56k	1-246-804-00
4.3		30	1-246-825-00	200	1-246-835-00	1.3k	1-246-845-00	9.1k	1-246-855-00	62k	1-246-865-00
4.7	1-246-755-00	33	1-246-765-00	220	1-246-775-00	1.5k	1-246-785-00	10k	1-246-795-00	68k	1-246-805-00
5.1		36	1-246-826-00	240	1-246-836-00	1.6k	1-246-846-00	11k	1-246-856-00	75k	1-246-866-00
5.6	1-246-756-00	39	1-246-766-00	270	1-246-776-00	1.8k	1-246-786-00	12k	1-246-796-00	82k	1-246-806-00
6.2		43	1-246-827-00	300	1-246-837-00	2.0k	1-246-847-00	13k	1-246-857-00	91k	1-246-867-00
6.8	1-246-757-00	47	1-246-767-00	330	1-246-777-00	2.2k	1-246-787-00	15k	1-246-797-00	100k	1-246-807-00
7.5	1-246-818-00	51	1-246-828-00	360	1-246-838-00	2.4k	1-246-848-00	16k	1-246-858-00	110k	1-246-868-00
8.2	1-246-758-00	56	1-246-768-00	390	1-246-778-00	2.7k	1-246-788-00	18k	1-246-798-00	120k	1-246-808-00
9.1	1-246-819-00	62	1-246-829-00	430	1-246-839-00	3.0k	1-246-849-00	20k	1-246-859-00	130k	1-246-869-00
10	1-246-759-00	68	1-246-769-00	470	1-246-779-00	3.3k	1-246-789-00	22k	1-246-799-00	150k	1-246-809-00
11	1-246-820-00	75	1-246-830-00	510	1-246-840-00	3.6k	1-246-850-00	24k	1-246-860-00	160k	1-246-870-00
12	1-246-760-00	82	1-246-770-00	560	1-246-780-00	3.9k	1-246-790-00	27k	1-246-800-00	180k	1-246-810-00

HARDWARE NOMENCLATURE

Screw:



Nut, Washer, Retaining ring:



Reference Designation	Shape	Description	Remarks
SCREWS			
P		pan-head screw	binding-head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-filister-head screw	
RF		filister-head screw	
BV		brazer-head screw	

Reference Designation	Shape	Description	Remarks
SELF-TAPPING SCREWS			
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self-tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
SET SCREWS			
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
NUT			
N		nut	
WASHERS			
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
RETAINING RINGS			
E		retaining ring	
G		grip-type retaining ring	